

Applicant: T Watanabe
U.S.S.N.: 09/994,539
Response to Final Office Action
Page 6 of 10

REMARKS

Applicant appreciates the Examiner's thorough examination of the subject application and requests reconsideration of the subject application based on the foregoing amendments and the following remarks.

Claims 1-26 are pending in the subject application.

Claims 1-26 stand rejected under 35 U.S.C. §102 and/ or 35 U.S.C. §103.

Claims 1-26 were canceled in the instant amendment without prejudice to prosecuting them in a continuing application.

Claims 27 and 28 were added to more distinctly claim embodiments and/or aspects of the present invention.

The amendments to the claims are supported by the originally filed disclosure. It also is respectfully submitted that the amendments to the claims does/ do not require further search and consideration and thus, entry of these amendments into the subject application is respectfully requested.

In view of the cancellation of claims in the foregoing amendment, Applicant does not believe that the §102 and §103 rejections of these claims need be addressed further herein as to the canceled claims. Applicant has, however, included remarks below as to why the new/added claims are considered to be distinguishable from the art upon which these rejections were based.

Applicant: T Watanabe
U.S.S.N.: 09/994,539
Response to Final Office Action
Page 7 of 10

CLAIMS 27-28

As indicated above, claims 27 and 28 were added to more distinctly claim embodiments/aspects of the present invention. These claims, as provided below, are clearly supported by the originally filed disclosure, including the originally filed claims. It also is respectfully submitted that these added claims are patentable over the cited prior art on which the rejections in the above-referenced Office Action are based.

As support for new claim 1, Applicant draws the Examiner's attention to (for example) page 32, lines 6-16 of the subject application that includes a discussion of some of the reading operations which can be carried out by the imaging apparatus of the presently claimed invention. Reference also is made to Figs. 4 and 8-11 of the subject application as well [*e.g.*, supports the feature of a green (G) signal having a spatial resolution of a first square and a red (R) or blue (B) signal having a spatial resolution with the shape of a second square lying within the first, for 1/2 decimated reading (Fig. 4), for 1/4 decimated reading (Fig. 8), for 1/8 decimated reading (Fig. 9), for 1/16 decimated reading (Fig. 10) and for 1/18 decimated reading (Fig. 11)].

As support for new claim 2, Applicant draws the Examiner's attention to (for example) page 26 lines 23 - page 27 line 7 of the subject application (*e.g.*, discussion provides that when the reading operation is performed in a 1/2 decimated manner, the first spatial resolution is up to half of the Nyquist threshold value in both horizontal and vertical directions and up to 1/2 of the Nyquist threshold value in both diagonal directions, and the second spatial resolution is up to 1/2 of the Nyquist threshold value in both horizontal and vertical direction and up to 1/4 of the Nyquist threshold value in both diagonal directions). Reference also is made to Figs. 4 and 8 -

11 and the discussion related thereto of the subject application (*e.g.*, as noted above Figs. 8, 9, 10 and 11 cover the cases of $1/4$, $1/8$, $1/16$ and $1/18$ reading operations).

As to the references forming the basis for the rejections in the above-referenced Office Action, Applicant makes the following observations.

The references do not disclose, teach nor suggest the feature of a G signal having a first spatial resolution with a shape of a first square and each of an R signal and a B signal having a second resolution with a shape of a second square lying within and touching four sides of the first square when performing a reading operation in a $1/2$, $1/4$, $1/8$, $1/16$ or $1/18$ manner. In addition, the cited references do not disclose, teach nor suggest a color state imaging apparatus performing at least one of a reading operation in a $1/2$, $1/4$, $1/8$, $1/16$ or $1/18$ decimated manner.

Parulski discloses a subsampling pattern (see col. 6, lines 11-22, and figure 4 thereof) where a circle surrounds each sampled pixel. This pattern is for sampling during a low resolution mode, wherein only a quarter of the pixels of the array are sampled (see col. 5, lines 55-60 of Parulski). In this pattern, the green (luminance) elements are subsampled in a checkerboard type arrangement by selecting every second green element of every line but staggering the sampling by one element to form a subsampled Bayer type checkerboard. The red and blue elements near the selected green elements are chosen in order to provide color samples which are spatially adjacent with some of the luminance samples. Another subsampling pattern is discussed in relation to figure 5 of Parulski. In this example, the green pixels are used directly, while the two horizontally adjacent red values are averaged to form a red pixel value at every

Applicant: T Watanabe
U.S.S.N.: 09/994,539
Response to Final Office Action
Page 9 of 10

second green location and the two vertically adjacent blue values are averaged to form a blue pixel value at the same locations.

New claim 27 provides that for each of these reading operations: "a G signal has a first spatial resolution with a shape of a first square and each of an R signal and a B signal has a second resolution with a shape of a second square lying within and touching four sides of the first square". An advantage of the above mentioned feature is that well-balanced color signal resolution can be obtained, as disclosed in the subject application (see page 32 lines 16-19). Parulski does not disclose, teach nor suggest a color solid state imaging apparatus that is configured so as to perform a reading operation so that a G signal has a first spatial resolution with a shape of a first square and each of an R signal and a B signal has a second resolution with a shape of a second square lying within and touching four sides of the first square.

The secondary reference, Campbell is cited for allegedly disclosing the feature of reading RGB pixels in two different diagonal directions. Whatever Campbell may allegedly teach or discloses, it does not discuss subsampling patterns. Thus, Campbell cannot and does not make up for the noted deficiencies of Parulski.

In sum, Applicant respectfully submits that new claims 27 and 28 are patentable over the disclosures and teachings of the cited references, alone or in combination. Therefore allowance of these claims is respectfully requested.

It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

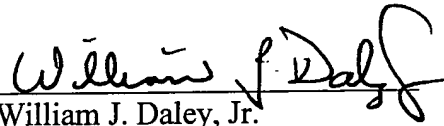
Applicant: T Watanabe
U.S.S.N.: 09/994,539
Response to Final Office Action
Page 10 of 10

Applicant believes that additional fees are not required for consideration of the within Response. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No. 04-1105.

Respectfully submitted,
Edwards & Angell, LLP

Date: September 12, 2005

By:



William J. Daley, Jr.
(Reg. No. 35,487)
P.O. Box 55874
Boston, MA 02205
(617) 439- 4444

Customer No. 21,874

Bos2_507320